

## **REMARKS**

Reconsideration of the rejection of the claims under 35 USC §§ 102, 103 as unpatentable over Sales is respectfully requested.

Claims 1 and 11 have been amended to clarify the invention. In particular, the claims have been amended to recite that the degree of taper of the transition prisms is substantially that of the main prisms to account for small differences in manufacturing. This is supported in the original disclosure, for example at paragraph 7. Claim 1 has been amended to make it clear that the transition zone is shorter than the first portion of the transition prisms. This is clearly disclosed also in paragraph 7. Claim 11 has been amended to clarify that the method of manufacture comprises cutting grooves into a mold. This is disclosed at paragraph 23. New claim 16 recites the feature of the invention whereby the transition prisms are shorter than the main prisms, which is also disclosed at paragraph 7.

With regard to the Sales reference, the office action makes specific reference to zones 53 and 54 as shown in figure 6 and asserts that the taper of prisms 721 and 722 are the same. It is again submitted that there is no support for this finding in the Sales patent and that, instead, Sales teaches no more than the structure shown in Figure 1 of the instant application, which is acknowledged to be prior art. This office action appears to focus on Figure 6 of Sales and the description at column 8, lines 46-56.

With regard to Figure 6, it appears that the basis of the examiner's finding is a visual inspection or, perhaps, measurement, of the structure illustrated in Figure 6. While a drawing can be used as prior art, it is improper to do so when the important aspect of the drawing is its proportions and the reference is silent as to the dimensions. Because Sales does not state that his drawings are to scale, an argument based on measurement or visual inspection of the drawing features is of little value. See, MPEP §2125. This principle was applied in the recent decision by the Board of Patent Appeals and Interferences, *Ex parte Frenk*, 2009 Pat. App. Lexis 14 (2009), a copy of which is attached. In that case, the Board held that "it is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the

specification is completely silent on the issue,” citing *Hockerson-Halbertstadt, Inc. v. Avia Group Int’l Inc.*, 222 F.3d 951 (Fed. Cir. 2000). Because Sales makes no reference to the taper of the prisms in zones 53, 54, applicant submits that it provides no basis for the examiner’s conclusion.

The examiner points to the statement by Sales that the constant-width and variable-width prisms have substantially the same peak-to-peak widths “near the lower rim 44.” This is simply a statement that the two prisms start at essentially the same width but is not teaching that the widths or tapers retain that shape over a “major part” of the reflector as recited in claims 1 and 11 or that the transition zone is shorter than the remainder of the transition prism, as recited in claims 1, 11 and 15.

Moreover, Sales states clearly that “the variable-width prism elements 722 have a peak to peak width that increases with the length of the prism element, along the longitude of the refractor 40 from the top to the bottom of the refractor.” Column, 8, lines 29-32. Even if the rate were variable or discontinuous, as disclosed at lines 35-41, the disclosure that the width increases from the top to the bottom can only mean that the variances or discontinuities are small compared to the overall increase, which is still no disclosure of the noted limitations, or a reason for one of ordinary skill in the art to modify the reflector of Sales to provide this property.

With regard to the limitation that the transition zone is shorter than the respective transition prism, the examiner’s attention is drawn to the amendments to claims 1, 11 and 15 where the claims now recite that the transition zone is shorter than the remainder of the transition prism. Applicants respectfully request reconsideration of the finding that zone 59 of Sales shows this feature. As the examiner is undoubtedly aware, the zones of the Sales patent have nothing to do with the constant-width or variable-width prisms. The zones are used to describe the feature of Sales wherein the interior surface of the reflector includes parabolic segments 53-59 as described in connection with Figures 9A through 9E. Thus, zone 59 is not a “zone” of the constant or variable width prisms, and there is no textual disclosure of a “transition zone 59.”

Applicant submits that one of ordinary skill in the art would understand the Sales disclosure to teach a “transition” zone that extends the length of the reflector “from the top to the bottom,” as stated at column 8, lines 29 to 32. Moreover, if “zone” 59 is *the* transition

zone, then it would seem that zones 53-58 would not be transition zones, but the office action, in apparent contradiction, asserts that the only zones not transitioning are zones 53 and 54.

For the reasons set forth above, it is submitted that Sales does not teach the method claimed in claims 11-14.

With regard to the rejection of claims 5, 6, and 10 under 35 USC §103, it is submitted that Sales does not teach the general conditions of the claim, for the reasons explained above. The “general conditions” disclosed by Sales are that the variable-width and constant-width prisms are substantially the same widths “near the bottom” and that otherwise the peak-to-peak width increases with the length of the prism element along the longitude of the refractor. Applicant submits that given these “general conditions” it is not possible to arrive at the limitations of claims 5, 6, and 10.

With regard to a “mere change in size,” applicant submits that the difference between claims 5, 6, and 10 on the one hand and Sales on the other is not the size of the article under consideration. To the contrary, the difference lies in the provision of completely different structure, as explained above. In the authority cited by the examiner, *In re Rose*, the claim limitation in question was “a composite package of appreciable size and weight requiring handling by a lift truck,” a difference between the prior art and the claimed invention that has no relevance at all to the instant application.

Accordingly, it is submitted that this application is in condition for allowance, and an early indication thereof is respectfully requested. The examiner is invited to contact the undersigned with any outstanding matters.

All necessary extensions of time are hereby requested. Please charge all necessary fees to deposit account 50-1088.

Respectfully submitted,  
CLARK & BRODY

/Conrad J. Clark/

---

Conrad J. Clark  
Registration No. 30,340

**Customer No. 22902**  
1090 Vermont Avenue, NW, Suite 250  
Washington DC 20005  
Telephone: 202-835-1111  
Facsimile: 202-835-1755  
Date: January 19, 2010



1 of 115 DOCUMENTS

Ex parte ANDRE FRENK, FLORIAN BEUTTER, and FRANCO CICOIRA

Appeal 2009-005654

Application 10/861,818

Technology Center 3700

Board of Patent Appeals and Interferences

2009 Pat. App. LEXIS 14

June 19, 2009, Decided n1

n1 The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

[\*1]

Before DONALD E. ADAMS, ERIC GRIMES, and LORA M. GREEN, Administrative Patent Judges.

**OPINIONBY: GREEN**

**OPINION:**

GREEN, *Administrative Patent Judge*.

**DECISION ON APPEAL**

This is a decision on appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1-9. We have jurisdiction under 35 U.S.C. § 6(b).

**STATEMENT OF THE CASE**

Claim 1 is the only independent claim on appeal, and reads as follows:

1. A bone screw for connecting a plurality of bone fragments comprising:

first and second ends and a longitudinal axis, the first end having a first threaded portion with a first core diameter, a first external diameter and a first pitch, the second end having a second threaded portion with a second core diameter, a second external diameter and a second pitch, the second end further having a tool engaging surface; wherein the first external diameter is smaller than or equal to the second core diameter, and the first and second pitches are substantially equal.

The Examiner relies on the following evidence:

Kim US 5,779,704 Jul. 14, 1998

We reverse.

**ISSUE**

The Examiner finds that claims 1-9 are anticipated by Kim.

Appellants [\*2] contend that the pitches of the two threaded portions in Figure 2 of Kim cannot be characterized as "substantially equal" because the drawings are not described by the disclosure of Kim as being to scale.

Thus, the issue on appeal is: Have Appellants demonstrated that the Examiner erred in finding that the pitches of the two threaded portions in Figure 2 of Kim are "substantially equal" as required by independent claim 1?

#### FINDINGS OF FACT

FF1 The Specification teaches a bone screw, wherein "the pitch of the external thread at the front threaded segment and at the rear threaded segment [are] the same." (Spec. 2.)

FF2 The Examiner rejects claims 1-9 under 35 U.S.C. § 102(b) as being anticipated by Kim (Ans. 3).

FF3 The Examiner finds that Kim teaches a bone screw that is encompassed by the language of claim 1 (*id.* at 3-4).

FF4 Relying on Figure 2, the Examiner finds that Kim discloses a bone screw having a first end with a first threaded portion (threaded portion near ref. 40), and a second end having a second threaded portion (threaded portion near ref. 42), wherein, as can be seen in Figure 2 of Kim, the pitches of the first and second [\*3] threaded portions are substantially equal (*id.* at 3).

FF5 The Examiner notes that "the term 'substantially' is a broad term," thus "the prior art need not disclose threads that are precisely equal." (Ans. 5.)

FF6 Figure 2 of Kim is reproduced below:

[SEE FIG. 2 IN ORIGINAL]

Figure 2 shows an embodiment of the rod fixation system of Kim (Kim, col. 3, 11. 18-20).

FF7 The Examiner does not rely on any other disclosure in Kim as to the pitch of the two threaded areas.

FF8 "Substantially n2" may be defined as "[i]n a substantial manner; in substance; essentially."

>FTNT>

n2 substantially, Dictionary.com. Webster's Revised Unabridged Dictionary, MICRA, Inc.  
<http://dictionary.classic.reference.com/browse/substantially> (accessed: June 08, 2009).>ENDFN>

#### PRINCIPLES OF LAW

We recognize that during prosecution before the Office, claims are to be given their broadest reasonable interpretation consistent with the Specification as it would be interpreted by one of ordinary skill in the art. *In re American Academy Of Science Tech Center*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). Claim language, however, "should not [be] treated as meaningless." *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 951 (Fed. Cir. 2006). [\*4]

To anticipate, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001).

"[I]t is well established that patent drawings do not define the precise proportions of the elements and may not be relied on to show particular sizes if the specification is completely silent on the issue." *Hockerson-Halbertstadt, Inc. v. Avia Group Int'l Inc.*, 222 F.3d 951, 956 (Fed. Cir. 2000) (holding that the drawings could not be relied upon to construe whether the term "central longitudinal groove" required that the width of the groove be less than the combined width of the fins). "Ordinarily drawings which accompany an application for a patent are merely illustrative of the principles embodied in the alleged invention claimed therein and do not define the precise proportions of elements relied upon to endow the claims with patentability." *In re Olson*, 212 F.2d 590, 592 (CCPA 1954).

#### ANALYSIS

Appellants argue that the "threads 40 and 42 in Figure 2 of Kim cannot be [\*5] characterized as 'substantially equal' because the drawings are not described [by the disclosure of Kim] as being to scale." (App. Br. 3.) Appellants contend that the Examiner is improperly interpreting "substantially" as not requiring a precise proportion (*id.* at 3-4). According to Appellants, the Specification "calls for the pitches to be 'identical' and 'the same,'" thus the "qualifier 'substantially' read in this light thus means that to infringe the claim an accused bone screw need not be held to an impossibly high standard of metaphysical identity that does not allow for discrepancies due to typical manufacturing tolerances." (*Id.* at 4.)

Claim 1 requires that the screw have threaded portions on its first and second ends, wherein the pitch of the first and second portions are "substantially equal." As noted by Appellants, the Specification teaches that the pitches are "the same." The Examiner interprets "substantially" very broadly, without setting a limit on what would be considered substantially equal, and what would not. Given the teachings of the Specification, as well as the dictionary definition of "substantially" as "essentially," we agree with Appellants' interpretation [\*6] of "substantially the same" as being within manufacturing tolerances.

Therefore, as the Examiner relies solely on the drawings of Kim to support the finding that the pitch of the first and second threaded portions are "substantially equal," and as drawings do not define the precise proportions of the elements and may not be relied upon to show particular sizes if the specification is completely silent on the issue, we agree with Appellants that the Examiner has not established that Kim teaches a screw wherein the pitches of the first and second threaded portions are "substantially equal."

#### CONCLUSION(S) OF LAW

We find that Appellants have demonstrated that the Examiner erred in finding that the pitches of the two threaded portions in Figure 2 of Kim are "substantially equal" as required by independent claim 1.

We thus reverse the rejection of claims 1-9 under 35 U.S.C. § 102(b) as being anticipated by Kim.

REVERSED

#### Legal Topics:

For related research and practice materials, see the following legal topics:

Patent LawInequitable ConductGeneral OverviewPatent LawInfringement ActionsGeneral OverviewPatent LawU.S. Patent & Trademark Office ProceedingsFiling RequirementsDrawings